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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/044,639 | 01/10/2002 | Tor Jan Akerlund | MRKS/0032.C1/WBP | 9370 |

36735 7590 04/29/2005

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| EXAMINER |
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GAY, JENNIFER HAWKINS

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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3672

DATE MAILED: 04/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/044,639

Applicant(s)

AKERLUND, TOR JAN

Examiner

Jennifer H Gay

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24,50-55,57,60,61 and 70-92 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24,50-55,57,60,61 and 70-92 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, a support beam to which the mounting assembly of the extendable structure is mounted where the beam is on a drilling rig floor, a drilling tower, or between 2 and 3 meters off the rig floor as recited in claims 1, 50, 70, 71, 76, 77, 79, 80, 83-85, and 92 (it is noted that each of the claims listed do not include all of the above features but do include a recitation of the support beam being placed at one of the above locations or the apparatus itself being placed at one of the above locations) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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3. Claims 50-55, 61, 70-75, 77, and 83-92 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Neither the drawings nor the specification describes the disclosed apparatus being connected to a drilling tower. While it is recited in the specification that the apparatus is mounted on a support beam on the rig floor and in a drilling rig, this description does not include a drilling tower as the "rig floor" is merely the working surface surrounding the well and a "drilling rig" does not necessarily indicate a tower. A drilling rig can constitute merely a mast or even less for some horizontal drilling assemblies. For this reason the recitation in the above claims of the apparatus being secured to a "drilling tower" is considered new matter.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-24, 60, 74, and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelly (US 3,881,375) in view of Swoboda, Jr. et al. (US 3,840,128).

Regarding claim 1: Kelly discloses an apparatus for positioning a wellbore tong proximate a tubular at a well center. The apparatus includes the following features:

- A boom **24** with the tong **T** attached to the end thereof.
- A mounting assembly **10** coupled to an opposite end of the boom where the mounting assembly is coupled to a support member **14** on a drilling rig. (The examiner notes that there is no specific recitation in Kelly of the support member being on a drilling rig, however, as the operation disclosed is a drilling operation and the support member

must inevitably be connected to some part of the drilling rig this feature is taught.)

Kelly discloses all of the limitations of the above claims except for the booming being cantilevered and extendable via an actuating member.

Swoboda, Jr. et al. discloses an apparatus for moving a wellbore tubular gripping member similar to the apparatus of Kelly. Swoboda, Jr. et al. further teaches a cantilevered and extendable boom 36 and an actuating member (5:35-40) for extending and retracting the extendable boom relative to a well center.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified Kelly to include the extendable boom of Swoboda, Jr. et al. in order to have been able to move a tubular member in any desired direction (2:6-10). One would have been motivated to make such a combination because a tubular moving and coupling system that was not limited to movement in a signal horizontal plane and only limited movement about a vertical axis would have been provided (1:56-68). Such a system would have allowed movement and alignment of the tubulars of various sizes and shapes used in a well drilling environment.

Regarding claim 2: The boom of Swoboda, Jr. et al. is telescopic (Figure 2).

Regarding claims 3 and 18: The boom of Kelly is pivotable about a vertical axis (2:55-60) as is the boom of Swoboda, Jr. et al.

Regarding claims 4 and 19: The boom of Swoboda, Jr. et al. is pivotable about a horizontal axis via a pivot point 118.

Regarding claims 5 and 15: The boom of Swoboda, Jr. et al. includes an outer barrel 38 and an inner barrel 42.

Regarding claims 6 and 16: The boom of Swoboda, Jr. et al. includes an intermediate barrel 40.

Regarding claims 7 and 17: As shown in Figure 2 of Swoboda, Jr. et al., a portion of the inner barrel is slidably mounted in the intermediate barrel and a portion of the intermediate barrel is slidably mounted in the outer barrel.

Regarding claims 8 and 12: The mounting assembly of Kelly includes a base (element below element 18 and secured to element 14) and a carriage 10 that is pivotally attached to the base via bearings 18.

Swoboda, Jr. et al. teaches a similar mounting assembly that includes a base 82 and a carriage 70 that is pivotally attached to the base. As shown in Figure 2, a portion of the outer barrel is disposed in the carriage.

Regarding claims 9 and 24: The gripping assembly of Swoboda, Jr. et al. is movably attached to the inner barrel via pivot points 72, 78.

Regarding claims 10 and 13: As shown in Figures 11 and 12 of Swoboda, Jr. et al., the outer barrel is secured to the carriage via a clamping assembly.

Regarding claim 11: As stated in column 8, lines 37-64 of Swoboda, Jr. et al., the outer barrel is extendable relative to the carriage thus the outer barrel would be extendable relative to the clamping assembly.

Regarding claim 14: Though not specifically disclosed, the clamping assembly of Swoboda, Jr. et al. would inherently be releasable connected to the carriage in order to have been able to disassemble the apparatus for maintenance.

Regarding claim 20: The apparatus of Swoboda, Jr. et al. includes a motor 90 to adjust the position of the boom relative to the mounting assembly.

Regarding claim 21: The actuating member of Swoboda, Jr. et al. includes a piston and cylinder assembly (5:35-40, Figure 11).

Regarding claim 22: As seen in Figure 11 of Swoboda, Jr. et al., the piston and cylinder assembly is at least partially located on the boom.

Regarding claim 23: The piston and cylinder assembly of Swoboda, Jr. et al. is used to move the boom horizontally.

Regarding claim 60: As seen in Figure 1, the center of mass of the gripping assembly is aligned with the central axis of the boom.

Regarding claims 74, 75: The mounting assembly is selectively clamped to the support member via a plurality of bolts.

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6. Claims 50-55, 57, 61, 70-73, and 76-92 are rejected under 35 U.S.C. 103(a) as being unpatentable over McArthur (US 4,652,195) in view of Kelly (US 3,881,375).

Regarding claim 50: McArthur discloses an apparatus for positioning a wellbore tool for moving tubing joints. The apparatus includes the following features:

- A boom **130** with the tong **170** attached to the end thereof.
- A motive assembly **150** for changing the length of the extendable boom.
- A support beam **26** for coupling the extendable boom to a drilling tower **12**.

McArthur discloses all of the limitations of the above claims except for the tool being a tong capable of making up or breaking out tubulars.

Kelly discloses a movable wellbore tool that is a tong capable of making up or breaking out tubulars.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the apparatus of McArthur such that the tool was a tong as taught by Kelly in order to have eliminated the need for an operator to perform the separate step of making up or breaking out the tubulars once they are put into position.

Applicant is reminded that “[i]n considering in the disclosure of a reference, it is proper to take into account not only specific teachings of a reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.” *In re Pedra*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

Regarding claims 51, 81: The tool is movably attached to the inner barrel via pivot points **172, 174**.

Regarding claims 52, 82: The motive assembly includes a piston and cylinder assembly **150**.

Regarding claims 53 and 55: The boom of is movable both horizontally and vertically with respect to Figure 2.

Regarding claim 54: The boom is slidable along the mounting assembly between a first and second position.

Regarding claims 57, 87: The boom is telescopic.

Regarding claim 61: As seen in Figure 2, the center of mass of the gripping assembly is aligned with the central axis of the boom.

Regarding claims 70, 83, 88: McArthur discloses a method for engaging a first and second tubular using the above apparatus. The method involves the following steps:

- Positioning the apparatus on a drilling tower.
- Actuating the extendable boom to move the tool toward the well center from a first to a second position by varying the length of the tool.
- Engaging the first and second tubulars with the tool.

McArthur discloses all of the limitations of the above claims except for the tool being a tong capable of making up or breaking out tubulars.

Kelly discloses a movable wellbore tool that is a tong capable of making up or breaking out tubulars.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the apparatus of McArthur such that the tool was a tong as taught by Kelly in order to have eliminated the need for an operator to perform the separate step of making up or breaking out the tubulars once they are put into position.

Applicant is reminded that “[i]n considering in the disclosure of a reference, it is proper to take into account not only specific teachings of a reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.” *In re Pedra*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

Regarding claims 71, 84, 92: A support member 26 is attached to the drilling tower.

Regarding claims 72, 84: The extendable boom is coupled to the support member.

Regarding claim 73: The tong of Kelly connects a first and second tubular by rotating the first relative to the second.

Regarding claim 76: McArthur discloses an apparatus for positioning a wellbore tool for moving tubing joints. The apparatus includes the following features:

- A boom 130 with the tong 170 attached to the end thereof.
- A motive assembly 150 for changing the length of the extendable boom.
- A mounting assembly 30 that is coupled to an opposite end of the extendable boom to couple the boom to a support beam 26 for coupling the extendable boom to a drilling tower 12.

McArthur discloses all of the limitations of the above claims except for the tool being a tong capable of making up or breaking out tubulars.

Kelly discloses a movable wellbore tool that is a tong capable of making up or breaking out tubulars.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the apparatus of McArthur such that the tool was a tong as taught by Kelly in order to have eliminated the need for an operator to perform the separate step of making up or breaking out the tubulars once they are put into position.

Applicant is reminded that “[i]n considering in the disclosure of a reference, it is proper to take into account not only specific teachings of a reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.” *In re Pedra*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

Regarding claim 77: The beam is selectively attached to the drilling tower as any welded piece of metal can be removed from the parts it is attached to.

Regarding claim 78: The mounting assembly is clamped to the support beam that is convenient.

Regarding claim 80: McArthur discloses all of the limitations of the above claims except for the support beam being located between 2 and 3 meters above the rig floor. However, it would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have placed the support beam of McArthur between 2 and 3 meters from the rig floor, since it has been held that discovering an optimum value

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of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claims 86, 89: The apparatus includes a mounting assembly 30 for coupling the boom to the support member.

Regarding claims 90, 91: The boom is clamped to the support beam using a plurality of bolts 36 (Figure 9).

Response to Arguments

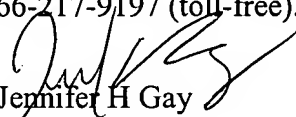
7. Applicant's arguments with respect to claims 1-24,50-55,57,60,61 and 70-92 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer H Gay whose telephone number is (571) 272-7029. The examiner can normally be reached on Monday-Thursday, 6:30-4:00 and Friday, 6:30-1:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jennifer H Gay
Patent Examiner
Art Unit 3672

JHG
April 20, 2005